

RKM-520

Wireless Mini Keyboard and Mouse Universal Remote Control

User Manual

7303-0261-003311

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Chapter 1: Quick guide to RKM-520 wireless device

Introduction

RKM-520 Integrated the wireless keyboard, mouse and universal remote control and it is exclusively designed for computers, home-entertainment systems and smart phones.

Items in package

Your newly purchased RKM-520 wireless device comes with the following items in the package. When any item does not come with package, please contact the source you purchased the device from.

1. RKM-520 Multi-functional remote control
2. USB RF receiver
3. User Manual

Optional: Mini USB cable

System requirement

- Keyboard/Mouse

Compatible only to USB Keyboard Mouse HID protocol under the Windows/Mac/Linux/Android operation system

- Remote control codes download

- Microsoft Windows XP/Vista/7

- 512MB RAM & 300MB Free Disk Space

- Available USB2.0 Port

- Microsoft Internet Explorer 8.0

- Available internet connection

Note:

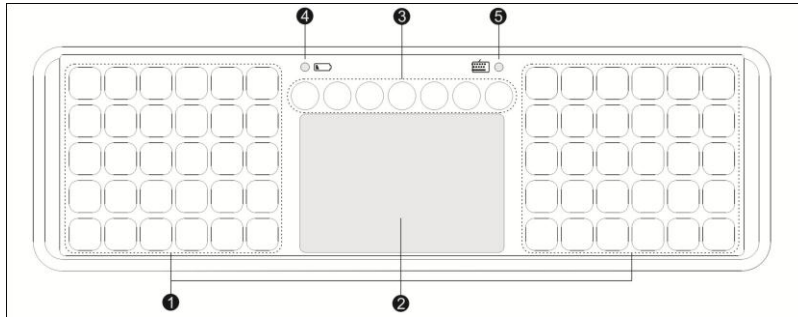
Under Microsoft Windows Vista/7, it will not perform “auto run” of the RKM-520 software.

Manually installation is required to install the RKM-520 software RKMAP.exe file from CD directory.

*****NO ACTUAL CD required for CD directory. The “KRMAP” CD directory will appear when RKM-520 is connected to the computer. *****

Parts and Keys

- Keyboard panel --- Keyboard, mouse, multi-media control functions



1. Keyboard


Alphanumeric function keys

2. Touch pad

Mouse function

3. Multi-Media function keys

 : Volume Increase  : Volume decrease

 : Mute

 : Previous  : Next

 : Play/Pause  : Stop

4. Battery status indicator

Recharging: (LED: Green):

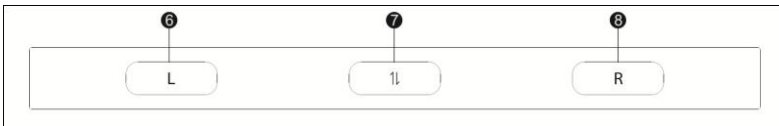
- No Battery: No LED light
- Charging: LED flashes regularly
- Fully charged: LED light stays on
- Abnormal battery: LED flashes rapidly

Low battery: Red LED flashes

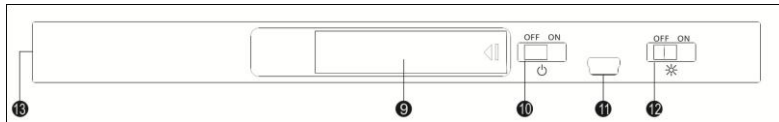
5. Keyboard/Mouse Indicator light

- Keyboard/Mouse indicator light stays on when operating
- Indicator light flashes as the key is pressed or touch pad is being operated when sending RF signal to the RF receiver.
- Power Saving: Indicator light off

- Side view

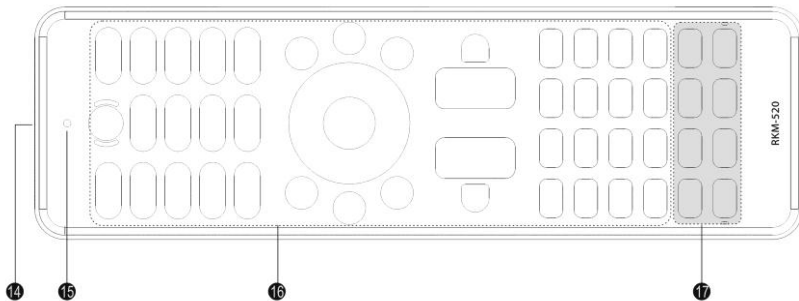


- 6. Mouse Left Button
- 7. Keyboard/Remote control switch
- 8. Mouse Right Button



- 9. Battery Cover
- 10. Power On/Off
- 11. USB Port
 - Channel for downloading remote control codes
 - Firmware upgrade
 - Battery charge
- 12. Backlight on/off
- 13. IR learning/transmitting

- Remote control panel --- Set up to 8 universal remote controls



- 14. IR learning/transmitting
- 15. Transmitting/Learning Indicator light
- 16. Remote control function Keys
- 17. Device selection key

Installing/Replacing batteries

- Installing batteries

1. Remove the battery cover by pushing it in the direction as the arrow shown
2. Insert 2 AAA Alkaline or Ni-MH batteries into the battery magazine as indicated
3. Replace battery cover

Caution:

- Insert batteries as indicated into the battery magazine (+/-)
- Please use 2 brand new batteries
- Insert the battery over the battery pull-up tag into the battery magazine for easy pulling off when replacing/inspecting the batteries
- Must use either Alkaline or Ni-MH batteries
- When charging through USB, it will automatically detect whether is rechargeable battery or not

- Replacing Batteries

1. Remove the battery cover by pushing it in the direction as the arrow shown
2. Pull the battery pull-up tag upward to remove battery
3. Insert 2 brand new batteries into the battery magazine
4. Replace battery cover

Remote control malfunctioning:

- A. Is power on?
- B. Are the batteries inserted correctly (+/-)?
- C. Is the battery pull-up tag placed correctly?
- D. Are the batteries brand new?
- E. Are the batteries either Alkaline or Ni-MH?(Do not mix them either by type, brand or new/old)

Chapter 2: Setting up your RKM-520 wireless device

Plug-n-play USB RF receiver

1. Insert the USB RF receiver to an already operational (Power on) computer/Notebook, TV or remote-able appliances with compatibility of USB Keyboard Mouse HID protocol USB port.
2. Switch the RKM-520 to keyboard/mouse mode
3. Press any key on RKM-520 for pairing

Keyboard/Mouse malfunctioning:

1. Ensure the computer/remote-able appliances are compatible and support USB Keyboard Mouse HID protocol.
2. Computer, TV or remote-able appliances must be already power on before Inserting USB RF receiver to the USB port.
3. Ensure RKM-520 is on keyboard/mouse mode.
4. Re-insert USB RF receiver

Note:

RKM-520 keyboard/mouse is only able to function under the Windows/Mac/Linux/Android OS system with USB Keyboard Mouse HID protocol.

USB RF dongle manual pairing:

When USB RF dongle is changed or not paired with RKM-520 , please pair again as the following steps:

1. Switch RKM-520 to keyboard/mouse mode, and then press “Fn + Esc ”till the indicator flashing.
2. Press “Fn + Esc” again.
3. Press any key on keyboard/mouse side to complete pairing.

Using keyboard and touch pad

Press switch key to switch to keyboard/touch pad function,
keyboard/mouse (light on)

Keyboard:

- Using it as you would be with a Qwerty keyboard
- Orange colored letters must press “Fn” first, then the orange colored letter
- “Fn” + “1 - 0” same as F1 – F10

Touch pad:

- **Cursor:** Using fingertip and slide on the touch pad as a cursor
- **Select:** Slide the touch pad and tapping on the touch pad once is to select
- **Clicking:** tapping the fingertips twice on the touch pad
- **Drag or move:** tapping the touch pad twice and drag
- Could be use with “L” Left button and “R” Right button

Two (2) methods on configuring RKM-520 wireless device

RKM-520 supports 8 in 1 universal remote control functions, prior to the settings. User can either download the remote control codes from the Internet or using learning feature to learn the codes from original device to RKM-520.

The labels on the device selective keys are for easy identification, and can be set for different device.

Method I: Download the remote control codes from Internet

This method only is able to perform under Microsoft Windows XP/Vista/7

1. Using mini USB cable (optional accessory) and connect to RKM-520 and PC or Notebook USB port.
 - Initiation will install the application software automatically
 - For Windows Vista/7 users, go to KRMAP CD directory, which will appear automatically when RKM-520 is connected, and open the KRMAP.exe and install it manually.

The screenshot shows a web browser window with the title "Online Remote Code Database". Below the title, it says "SUNWAVE : RKM-520" and "Remote ID : 08 03 1C 00 00 22 Ver : 0.1.0.1". There is a language dropdown menu set to "English" and a "Logout" link. The main content area has four tabs: "Remote Setup", "Registration Info", "Service", and "Firmware Update". The "Registration Info" tab is active. It contains a registration form with the following fields: "First Name", "Last Name", "Sex" (with radio buttons for MALE and FEMALE, where FEMALE is selected), "Nick name", "AGE" (a dropdown menu showing "35~39"), "E-mail", "Telephone", "Mobile No.", "Country" (a dropdown menu showing "US"), and "Address". There is a "Confirm" button at the bottom right of the form.

- After installing, it will automatically link to UI (User Interface) and select language.
 - First time user must complete the registration, otherwise, user will not be able to download the remote control codes
2. After completing the registration, UI will automatically link to remote control codes website.
 3. In the download control code page, select device type, modification is allowed or using default setting (e.g. TV), Input device name (e.g. SONY KV-J29MH9), then select the brand (SONY), and then select model number.
 4. Repeat step 3 and select other devices such as STB, DVD, BD, AMP, etc.
 5. Select "Preview" and confirm your selections

Online Remote Code Database

SUNWAVE : RKM-520
Remote ID : 0B 03 1C 00 00 22 Ver : 0.1.0.1

English [Logout](#)

Remote Setup
Registration Info
Service
Firmware Update

Item	Default Device	Device type	Device name	Brand	Model
1	TV	TV		SONY	KV-J29MH9
2	STB	TV		SONY	LCD SERIES - 2
3	DVD	DVD		Select	Select
4	BD	BD		SONY	BDP-S370
5	AMP	AMP		Select	Select
6	AUDIO	AUDIO		Select	Select
7	DISC	DISC		Select	Select
8	AUX	AUX		Select	Select

Preview
UserConfig
ResetDefault

6. Select “Create” and generate remote control code file.

Online Remote Code Database

SUNWAVE : RKM-520
Remote ID : 0B 03 1C 00 00 22 Ver : 0.1.0.1

English [Logout](#)

Remote Setup **Registration Info** Service Firmware Update

Item	Device type	Device name	Brand	Model
1	TV		SONY	KV-J29MH9
2	TV		SONY	LCD SERIES - 2
3	DVD			
4	BD		SONY	BDP-S370
5	AMP			
6	AUDIO			
7	DISC			
8	AUX			

[Back](#) [Create](#)

7. Click “Open” and it will automatically download and update the new remote control codes to RKM-520

Caution:

Do not click on save (s) button, due to legal rights. We Do Not suggest using save (S) and save the codes to your PC/Notebook.

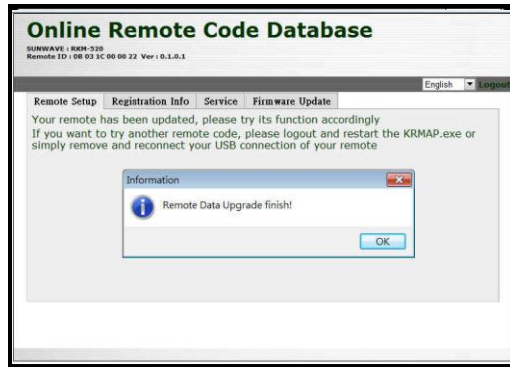
When doing so on the 6th attempt of saving the file, the file will be locked.

When this happened, user can select any file name and executing the update, locked file will be un-locked, but will lock the file at the 6th attempt.

8. Remote Date Upgrade finish!

9. Unplug the USB cable and test the RKM-520 by selecting a device and push power (e.g. TV), then press the function keys on the RKM-520. If the device does not respond, repeat the above steps and find a similar model of the same brand.

Or user can use the original remote control and transmit the codes to RKM-520 by learning function.



Method II: Learning remote control codes from original TV/device remote control

If you are not able to find or fully download the remote control codes for your remote control through Internet, you can use the learning method to transmit the codes from your original remote controls to RKM-520.

1. Select a learning device key you want for RKM-520 to learn from (e.g. TV)
2. Long press a selected device key (e.g. TV) for 3 seconds, (LED light comes on)
3. Release the device key (e.g. TV)
4. Press the key of the RKM-520 that you want to learn from original remote control device (e.g. TV – power key), the LED light on RKM-520 will keep flashing slowly (this means it is ready to receive signal from the original device).

At the learning mode, the code must be learned one key code at the time.

Note: Setting apart the original remote control from DKM-520 about 5cm in range. Ensure the original remote control's IR transmitting lens is facing DKM-520's IR transmitting/learning port

5. Then long press a (e.g. power) key of the original remote control. When the LED light stays on, on RKM-520 it means the code is learned and

repeats steps 4 and 5 for other keys. If the LED light flashes rapidly, it means it is failed to learn the code, and need to repeat the steps 4 and 5.

6. Repeat the steps 4 and 5 to continue learning progress.

7. Long press the selected device key (e.g. TV) for 3 seconds (LED light comes off) to leave learning mode while finishing.

Note:

- When no action is taken in the learning mode for more than 30 seconds, RKM-520 will be disengaged automatically.
- Long press the selected device key for 3 seconds is to disengage the learning mode anytime.
- The learning key codes will replace all the key codes downloaded from the Internet and vice versa.
- When having learned the key codes from your original remote controls to the RKM-520, you can upload the key codes from RKM-520 to the Internet data server as backup key codes for RKM-520 and also share the codes with other users.
- When in the downloading the remote control code UI page and select “Default Setting”, all the learned key codes will be erased.

Increase the learning rate:

- During the learning stage, the IR LED from the original remote control and RKM-520 transmitting/learning port must be toward each other in (LOS) line-of-sight between 3 and 5 cm range and hold both remote controls steady. Turn on the digital camera and press any key simultaneously on the remote control, the display on your digital camera will detect the location by visualizing the flashing of IR LED from the remote control.

- During the learning stage, the key pressed from the original remote control must be pressed and stay pressed until the key code is learned, otherwise, the key code learned from RKM-520 might be incomplete.

User instructions on RKM-520 wireless device

When you download the key codes from the Internet or learned from the original remote controls, your RKM-520 should perform as the original remote control, the RKM-520 supports up to 8 remote control AV devices.

Erasing a remote control code

Erasing a remote control code through learning from the original TV/device remote control.

1. Enter the learning mode
2. Long press the key which needs to be deleted for 3 seconds (LED off), when deletion is complete (LED on)
3. Release the key
4. Repeat steps 2 and 3 for erasing other keys
5. When all the key codes are erased, long press the device button (e.g. TV) for 3 seconds, it will disengage the learning mode (LED off)

Default setting

Default setting erases all the prior settings and the device will not store, restore or backup prior settings (except factory setting).

Instructions on default setting

1. Using Mini USB cable (Optional accessory) and connect to RKM-520 and a PC or notebook.
2. PC will automatically link to remote control code download user interface website.
3. Select “Default setting” and click on the selection, it will take about 1 minute for the RKM-520 to restore as factory setting.

Chapter 3: Care of RKM-520 wireless device

- Do not place RKM-520 in reagents, dusty area, under direct sunlight, high humidity, high temperature or easily miss-handled environment.
- RKM-520 is not a water proof/resistant device; keep it away from any liquid.
- Do not mix with new and old batteries; RKM-520 might malfunction due to battery leakage.
- Turn off RKM-520 or remove batteries when not in use or storing it for a long period of time.
- Do not use rubbing alcohol, corrosive or erosion additives to clean RKM-520, use a clean cloth to do the job.
- Do not dismantle RKM-520, the warranty will void.

Chapter 4: Troubleshooting

Q: Device malfunctioning

A: Is the device power on? Switch power on again.

A: Are batteries installed correctly (+/-)

A: Is the battery pull-up tag placed properly?

A: Is batteries brand new?

A: Are batteries either Alkaline or Ni-MH?

A: Replace the batteries when device indicates low battery.

Q: Keyboard and mouse malfunctioning

A: Ensure PC/Notebook or remote appliances support USB Keyboard Mouse HID protocol.

A: Is there a recent black-out in the house or computer crashed?

A: Turn on the PC/Notebook or remote appliances first, then plug-in USB RF receiver for pairing.

A: Is it switched to Key/Mouse mode?

Q: Remote control malfunctioning

A: Is RKM-520 either downloaded the codes from Internet or learned from original device(s)?

A: **Note for Windows Vista/7 users**, RKM-520 is unable to “auto-run” application software directly from CD. Go to CD directly and manually install the KRMAP.exe file.

A: Make sure the AV system main switch is set “off”, test the AV system with factory-given remote controls.

A: Make sure you select the correct device key on RKM-520 for the AV system you’d like to control of.

A: Is RKM-520 on remote control mode?

Q: Not able to find the correct model(s) to download the codes from Internet.

A: Try similar brand or model of your TV/AV device.

A: Use learning method to learn the codes from the original remote control(s).

Q: Key codes are downloaded partially or wrong key codes

A: Use learning method to learn the lack of key codes in RKM-520.

A: Wrong key codes can be substituted by using learning method to re-learned the key codes.

Q: “Power” or “Signal Input” function inoperable

A: The power and signal input codes are inconsistent on some remote controls; however these special key codes can be learned by using learning method.

Q: After learning from original A/C device, RKM-520 can not remote A/C accordingly.

A: A/C remote control’s signals are transmitting based on combining the operation setting and codes together then transmit the signal at once to A/C.
Although the codes are the same with A/V systems, how it transmits the signals are different from the A/V systems.

A: You can learn the following functions on an A/C remote control: High, Med, Low, dehumidify and power off.

Q: Can all remote control codes be downloaded or learned?

A: No 100% guarantee on the codes can be downloaded or learned, the code servering through Internet is the best way to share the codes

Q: RKM-520 codes learned correctly, but the A/V system is not responding.

A: Repeat the learning method.

A: During the learning stage, the IR LED from the original remote control and RKM-520 transmitting port must be toward each other in (LOS) line-of-sight with 3-5 cm range and hold both remote controls steady.

A: Some original remote control, the IR LED might not be in the front or can easily be seen. You can detect the IR LED location by using a digital camera or a smart phone with a display. Turn on the digital camera and press any key simultaneously on the remote control, the display on your digital camera will detect the location by visualizing the flashing of IR LED from the remote control.

A: In the learning stage, the key must be pressed and hold on it until the RKM-520 has indicated that it has learned the code and then release the key. When press and release the key quickly, RKM-520 might not be able to learn the code completely and code error may occur.

A: Replace batteries in original remote control.

Q: When linked to the Web browser the upload message appears, will it be alright not to upload the codes? By uploading the codes, will my personal information be submitted to the server?

A: Your contribution in uploading the codes will be greatly appreciated and with your permission to do so. We will store the codes and the only the codes will be shared with other users. And likewise, the codes in the server were also contributed by other users like you around the world.

A: You don't have to upload the codes.

A: When uploading the server only stores the codes from the RKM-520 and will display the codes for confirmation before sending codes to the server, your personal information will not be submitted to the server.

Chapter 5: Specifications

- IR / 2.4GHz RF
- transmitting range: 10M (LOS Line of sight)
- USB RF receiver: compatible Windows/ Mac/ Linux/ Android Keyboard Mouse HID
- transmitting range: 8 – 10M (LOS Line of sight)
- Learning and transmitting carrier frequency: 10 – 455KHz & Pulse
- Flash Memory:1MB
- Compatible USB 1.1/2.0
- Power: 2 x AAA Alkaline/ Ni-MH batteries
- Power Consumption:
 - operation current: 20 -100 mA
 - idle current: 80 uA
- Net weight (Battery not included):142g
- Dimensions: 180(L) x 56(w) x 21(D) mm

- Keyboard and mouse are compatible to Windows/ Mac/ Linux/ Android Keyboard Mouse HID
- Internet download is compatible to Microsoft Windows XP/Vista/7



WEEE Directive & Product Disposal

At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronics equipment, or returned to the supplier for disposal.

Internal/Supplied Batteries

This symbol on the battery indicates that the battery is to be collected separately. This battery is designed for separate collection at an appropriate collection point.

Battery is not included in the product package.